Shuocheng Guo, Ph.D.

📞 217-904-9210 — ✉ gshuocheng@gmail.com — 🔗 linkedin.com/in/sguo18 — ⬛ sguo28.github.io — 🏠 San Diego, CA

Summary — Shuocheng holds a **Ph.D. in Transportation Systems Engineering** from **The University of Alabama (UA)**, with expertise in **Operations Research (OR)** and **Data Science (DS)**. He is currently working as a **Research Scientist at Amazon**, aiming to leverage his strong optimization skills to tackle real-world challenges.

Technical Skills

Languages	Python (numpy&pandas), R, Julia, SQL
DS	AWS, Power BI, Node.js, deck.gl
Optimization	XPRESS, Gurobi, MOSEL
OR	VRP, MILP, Warehouse, Assignment

Experience

Amazon, Amazon Minerva — Feb 2025 – Present
Research Scientist — *San Diego, CA*

- *Key Skills: Python, XPRESS, OR, DS, AWS*

Amazon, Amazon Fulfillment Technologies (AFT) — June 2024 – Sep 2024
Research Scientist Intern — *Bellevue, WA*

- *Key Skills: Python, XPRESS, OR, AWS*
- Developed a **mathematical optimization** model to solve order picking problem in Amazon bulk businesses, significantly **improving space utilization** and **operational efficiency by X %**
- Designed an automated data pipeline using **SQL and AWS** to streamline data retrieval for the optimization

Delta Air Lines, Operations Decision & Data Science (ODDS) — Jan 2024 – May 2024
Ph.D. Intern – Decision Scientist — *Atlanta, GA*

- *Key Skills: Python, Gurobi, OR, DS, AWS, Git*
- Developed and refined mathematical models and heuristics to improve the baggage handling system's efficiency, achieving a **X% reduction in CPU times**, which expedited the transition to the **production phase**.
- Enhanced the user interface platform's pipeline using **Power BI, SQL, and Python**, streamlining data processing.

The University of Alabama, Alabama Transportation Institute — Aug 2020 – Dec 2024
Graduate Research Assistant — *Tuscaloosa, AL*

Route Scheduler for Para-Transit System

- *Skills: Python, Julia, Node.js, OR, GNN, Gurobi*

Agent-Based Simulation Platform for Electric Taxi

- *Skills: Python, Simulation, Deep Reinforcement Learning*

Education

The University of Alabama — Sep 2020 – Dec 2024
Ph.D. in Transportation Systems Engineering — *Tuscaloosa, AL*
University of Illinois at Urbana-Champaign — Sep 2018 – May 2020
M.Sc. in Transportation Systems Engineering — *Urbana, IL*
Central South University — Sep 2015 – Jun 2018
B.Sc. in Civil Engineering — *Changsha, China*

Publications

Short Summary: I have 10+ strong publications and manuscripts related to OR, DS and ML, all published in Transportation Research-Part A / B / C / D and IEEE Transactions on ITS. In addition, I presented at 5 peer-reviewed conferences and over 10 oral and poster sessions, including the TRBAM 2021-2025 and INFORMS 2022-2024. See my Google Scholar for more details.